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AREI **UPDATES**

Updates on Agricultural Resources and Environmental Indicators Number 12 October 1996

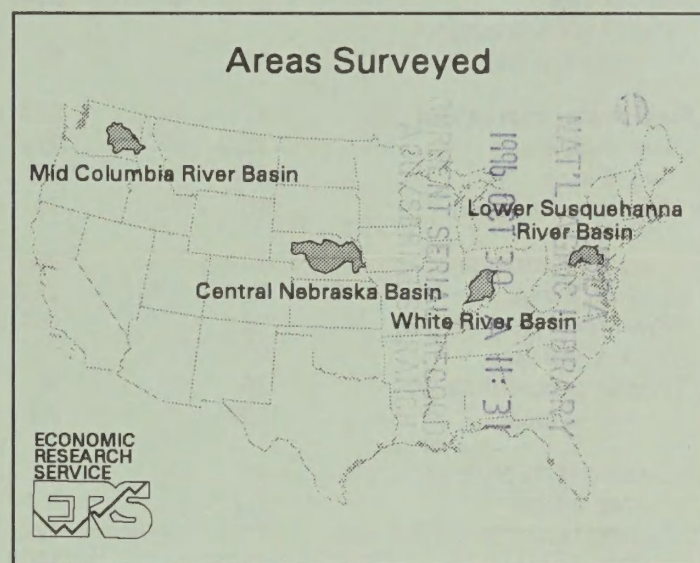
Recreation and the Environment: Survey Results from Four Areas

- Adults in four sub-state areas with intensive agriculture were surveyed in 1994 to gain insights on recreational activity and importance of water quality.
- Most of the 1,500 survey respondents had engaged in some form of outdoor recreation in the 12 months prior to the survey, and about half had visited a river, lake, or wetland within 100 miles of their residence.
- Water quality was important to 60 percent of respondents questioned about a recent freshwater trip, and there was a strong correlation between this importance and the water quality of the visited site.

Agriculture is a resource intensive industry that can affect the environment and the quality of the recreational experience in rural areas. To gain information about these possible effects, USDA-ERS sponsored the inclusion of four sub-state areas (see map) in the 1994 National Survey of Recreation and the Environment (see box on page 4). Adult respondents to the survey were questioned about their outdoor recreational activities during the year and reasons for selecting the most recent trip site.

About 85 percent of the respondents had engaged in some form of outdoor recreation (any activity done outdoors for pleasure, including bicycling, walks in the park, and outdoor sports) during the previous 12 months (table 1). Of these outdoor recreators, 776 visited freshwater sites (such as lakes, rivers, and wetlands) within 100 miles of their home. The average number of freshwater sites visited was three, the number of trips taken was 18, and the average distance traveled was about 29 miles. The 423 river recreators averaged 14 trips to rivers, the 720 lake recreators averaged 10 trips to lakes, and the 101 wetland recreators averaged 7 trips to wetlands. Most trips were taken to a "favorite site," with 11 (of the 18 overall trips) taken to the most favorite site, and 5 to the second most favorite site.

The survey also obtained detailed information on the most recent trip for each of the 776 nearby-freshwater recreationists. When asked whether this trip was worth at least as much as they spent, about 80 percent of the respondents said yes. About 60 percent of those saying



yes provided a value for the maximum amount extra he/she would have paid for the trip, which averaged about \$32.00.

When asked the "importance of water quality," about 30 percent said that water quality was important, and 30 percent said it was very important. Also, about 90 percent of the respondents rated the water quality of the site they visited as at least "good enough to swim in." While there was little correlation between those who "thought their trip was worth it" and water quality, there was a fairly strong correlation between those who thought water quality was "important" and the perceived water quality of the site they visited (table 1).

Participation in freshwater recreation was about the same in the surveyed areas except for the Mid-Columbia basin where respondents tended to participate more frequently and place a higher value on their most recent trip (table 1). Rural respondents tended to participate more in freshwater recreation and place less value on their recent trips than did urban respondents (table 2).

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About AREI UPDATES

AREI UPDATES is a periodic series that supplements and updates information in **Agricultural Resources and Environmental Indicators (AREI)**, USDA, ERS, AH-705, Dec. 1994. **UPDATES** report recent data from surveys of farm operators and others knowledgeable about changing agricultural resource use and conditions, with only minimal interpretation or analysis. Please contact the individual listed at the end of the text for additional information about the data in this **UPDATE**. If you would like to be added to the mailing list or have other questions about **AREI UPDATES** or **AREI**, contact Richard Magleby, (202) 219-0436. [rmagleby@econ.ag.gov]

Table 1—Participation in freshwater recreation, 4 sub-state regions, 1994

Item	Region				All observations
	Central Nebraska	Mid-Columbia	Lower Susquehanna	Central Indiana	
Sample size	373	384	378	375	1510
Participated in outdoor recreation ¹ (%)	83	89	86	81	85
Freshwater recreators (#)	179	263	163	171	776
Avg. # trips	13.9	21.3	16.7	19.0	18.3
Avg. # sites	2.8	3.5	3.4	2.8	3.2
Avg. miles traveled	30	36	22	28	29
Lake recreators (#)	169	248	136	167	720
Avg. # trips	8.8	13.2	7.7	9.0	10.1
River recreators (#)	92	163	100	68	423
Avg. # trips	9.5	12	15.1	24.0	14.3
Wetland recreators (#)	26	38	34	13	101
Avg. # trips	8.3	7.1	5.2	8.4	6.8
Boating recreators (#)	45	82	34	41	202
Avg. # trips	7.2	9.9	6.7	8.3	8.5
Fishing recreators (#)	75	122	72	81	350
Avg. # trips	11.9	15.8	16.3	12.3	14.3
Swimming recreators (#)	33	61	33	30	157
Avg. # trips	6.5	9.9	6.8	8.3	8.2
Nature viewers (#)	70	87	65	39	261
Avg. # trips	6.9	8.7	12.6	7.5	9.0
Other recreators (#)	45	97	55	50	247
Avg. # trips	12.1	14.6	4.4	26.9	14.4
Freshwater recreators assessment of recent trip to a freshwater site:					
"Was worth the cost" (%)	76	82	81	74	79
Avg. net benefit ²	\$19.00	\$42.00	\$30.00	\$31.00	\$32.00
Water quality was:					
Swimmable or better (%)	80	89	81	89	86
Important (%)	19	34	27	26	27
Very important (%)	24	30	31	25	28
Reasons why water quality at the "recent trip" site was important:					
Use & appearance (%)	41	41	35	43	42
Ecological (%)	14	16	22	22	18
Not important (%)	31	36	37	31	34
Correlation between perceived water quality and importance of water quality on recent trip:					
Correlation	0.17	0.17	0.14	0.14	0.18

¹Outdoor recreation included any activity respondent did outdoors for pleasure during the previous 12 months, such as (but not limited to) swimming, boating, hunting, birdwatching, jogging, tennis, bicycling, and camping.

²For those whose trip was worth at least their actual costs, the maximum extra amount they would have paid for the trip (in addition to the actual costs).

Source: USDA/ERS analysis of the National Survey of Recreation and the Environment

Table 2—Participation in freshwater recreation by urban and rural residents, 1994¹

Item	Urban-rural category				
	Farm	Rural	Small town	Suburban	Urban
Sample size	193	211	556	297	205
Participated in outdoor recreation ² (%)	84	90	83	89	84
Freshwater recreators (#)	100	127	273	161	98
Avg. # trips	23	27	15	15	14
Avg. # sites	3.3	3.3	3.0	3.0	3.0
Avg. miles traveled	31	27	29	32	29
Lakes recreators	96	121	243	152	90
Avg. # trips	10.0	13.0	9.9	8/5	8.9
River recreators	59	62	159	92	43
Avg. # trips	2.6	27.3	9.2	11.8	12.1
Wetland recreators	13	20	37	16	14
Avg. # trips	7.0	6.6	9.6	4.2	2.8
Boat recreators	23	28	71	50	29
Avg. # trips	12.4	11.2	6.5	8.3	7.7
Fishing recreators	55	62	123	67	38
Avg. # trips	15.6	17.8	15.7	8.9	11.8
Swimming recreators	16	33	46	35	22
Avg. # trips	10.1	12.6	6.7	8.2	4.1
Nature viewers	35	49	90	47	33
Avg. # trips	4.0	12.6	8.7	11.4	7.1
Other recreators	31	24.3	87	51	36
Avg. # trips	26.6	38	7.7	11.3	9.6
Freshwater recreators' assessment of recent trip to a freshwater site:					
"Was worth the cost" (%)	81	82	77	80	79
Avg. net benefit ³	\$28.00	\$29.00	\$31.00	\$35.00	\$37.00
Water quality was:					
"Swimmable or better" (%)	94	84	87	88	79
Very important	30	31	31	26	20
Important	26	32	20	31	35
Reasons why water quality at the "recent trip" site was important:					
Use and appearance (%)	47	39	40	37	43
Ecological (%)	18	22	19	17	15
Not important (%)	30	32	32	39	37
Correlation between perceived water quality and importance of water quality on recent trip:					
Correlation	0.06	0.22	0.11	0.19	0.36

¹Combined 4 sub-state regions.

²Outdoor recreation included any activity respondent did outdoors for pleasure during the previous 12 months, such as (but not limited to) swimming, boating, hunting, birdwatching, jogging, tennis, bicycling, and camping.

³For those whose trip was worth at least their actual costs, the maximum extra amount they would have paid for the trip (in addition to the actual costs).

Source: USDA/ERS analysis of the National Survey of Recreation and the Environment

National Survey of Recreation and the Environment

This survey was conducted during 1994 by the U.S. Department of Interior with participation from various other Federal agencies. The information helps assess how environmental changes are affecting recreation and how better recreational opportunities can be provided. A USDA-ERS sponsored module of the survey collected data from 1,501 adult respondents living in four sub-state areas where the effects of intensive agriculture on environmental quality were under study. The sample frame for the survey was constructed using random digit dialing so that unlisted phones would be included. For each contacted household, the adult (defined as an individual 16 years or older) with the most recent birthday was interviewed; with several recalls attempted should that individual be temporarily unavailable. Despite these randomization procedures, the sampled adults overrepresented wealthier families, more educated and older individuals, and women.

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